

Work Order ID 82504

Tuesday, April 17, 2012 1:12:32 PM

82504

Page 1

Item ID: D205-634-041

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Replacement Skidtube

Start Date: 4/3/2012 Start Qty: 1.00 ***1***

Cust Item ID:

Required Date: 4/4/2012 Req'd Qty: 1.00 ***1***

Customer: CU-DAR001

Reference: RMA RA111333 - RETURN

Approvals: Process Plan: *mf* Date: *12-04-17* Tooling:

Run Start ***NR1***

QC: Date: SPC (Y/N):

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
D2580-041	(DEO) Rev.E

100 0.00

100

QC

Quality Control

Memo

0.00

INSPECT RA 111333 D205-634-011 B 76553 X 1 @ CHG 007

UPON INSPECTION, THE K-KIT WAS NOT RETURNED

STOCK AS D205-634-041 CHG 002

110 0.00

110

Skidtubes

Skidtubes

Memo

0.00

-DISSASSEMBLE AFT CAP
-DISSASSEMBLE WEARPLATES AND PUT ASIDE
-SCRAP GASKETS AND REPLACE WITH NEW ONES WHEN RE-ASSEMBLING

-SCRAP ALL HARDWARE AND REPLACE WITH NEW

DART Dart Aerospace Ltd. 700 ABERDEEN ST. WILKESBURY, ONT. CANADA K6A 1K7		TO APPROVAL # 09-69 TEL: 1-613-632-5200	
PN	D205-634-011	CHG	CHG 007
DESC	Skidtube	SIC	SH96-88
LOT	B76553	SIC	SR00563NY
MODEL	Bell 205/210/212/214/412/UH-1	SIC	
ENTS US #5735484 CA #2222184 EUROPEAN No # 6826655		MADE IN CANADA 02729-2	

B 82504

Dart Aerospace Ltd

W/O: 82504		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
12/04/24	116	Scrap: D3564-9 (wcap plate) x1 D2855 (end-cap) x1 D2594-1 (plogs) x16 2594-3 onlogs	lb	12/04/24	x1 x1 x16 x16		
12/04/24	110	Scrap: AWS4-1032-130 inserts	lb	12/04/24	x50		

Part No: D205-634-041 PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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NOTE: Date & initial all entries

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Item Name: Replacement Skidtube

Stop *NS2*

Start Date: 4/3/2012 Start Qty: 1.00 *1*

Cust Item ID:

Required Date: 4/4/2012 Req'd Qty: 1.00 *1*

Customer: CU-DAR001

Reference: RMA RA111333

Approvals: Process Plan: Date: Tooling: Date:

Run Start *NR1*

QC: Date: SPC (Y/N): Date:

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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120	QC5- Inspect part completeness to step on W/O	0.00							
-----	---	------	--	--	--	--	--	--	--

120

QC

Memo

0.00

Quality Control

130		0.00							
-----	--	------	--	--	--	--	--	--	--

130

HandFinish

Memo

0.00

Hand Finishing

STRIP ENTIRE TUBE WITH PAINT STRIPPER

Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch and leave fwd cap out of solution.

140	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum	0.00							
-----	--	------	--	--	--	--	--	--	--

140

Powdercoat

Memo

START TIME:

OVEN TEMPERATURE:

FINISH TIME:

9:20 0.00
320 °F
9:50

Powder Coating

M121134

1x 12/04/25

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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82504

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Accept

N900040100

Setup Start *NS1*

Stop *NS2*

Cust Item ID:

Start Date: 4/3/2012 **Start Qty:** 1.00 ***1***

Required Date: 4/4/2012 **Req'd Qty:** 1.00 *** 1 ***

Customer: CU-DAR001

Reference: RMA RA111333

Approvals: Process Plan: Date: Tooling: Date:

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop *NR2*

Operation Description

Set Up/ Run Hours

Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
---------	--------	-----------	------------	------------	---------------	-------------

150

QC3- Inspect Part Finish

0.00

150

QC

Memo

0.00

Quality Control

160

Grey Sandtex(Ref:4.3.5.6) per QSI005 4.3

0.00

160

Powdercoat

Powder Coating

Memo

0.00

STRIP ALL WEARPLATES AND REPOWDER COAT GREY

START TIME: 9:30 AM OVEN TEMPERATURE:

10:00 ~~pm~~ FINISH TIME: 320°

170

QC3- Inspect Part Finish

0.00

170

QC

Quality Control

Memo

0.00

W/O:		WORK ORDER CHANGES					
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Item ID: D205-634-041

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N900040100

Setup Start

NS1

Revision ID:

Item Name: Replacement Skidtube

Stop

NS2

Start Date: 4/3/2012 Start Qty: 1.00

1

Cust Item ID:

Required Date: 4/4/2012 Req'd Qty: 1.00

1

Customer: CU-DAR001

Reference: RMA RA111333

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

180

0.00

180

Skidtubes

Skidtubes

Memo

0.00

1-Install inserts

Install wearplates (same ones that were repowdercoated)

Install new Gaskets as per Dwg. D2580. Use a drop of Sikaflex on insert holes before installing wearplates

A/R Sikaflex-291 11/12/22

Sikaflex expire date: 12/01

2-Coat D2594-3 O' rings with Petroleum Jelly and install on D2594-1 plugs as per Dwg D2580

3-Inspect for foreign object per QSI 024

4-Install 2855 Aft Cap as per Dwg D2580 and seal Fwd Step & Aft Cap with Sikaflex. Clean excess adhesive

A/R Sikaflex-291 11/12/22

Sikaflex expire date: 12/01

5-Wing Walk as per Dwg D2580 and QSI 005 4.4

Batch: 11/12/0959

PTG-1

1x 0 11/12/22 25

W/O: 82504		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
12/04/25	160	Assemble with: D2855/B75071 D3564-9/B82255	yu	12/04/25	X1 X1		

Part No: D205-634-041 PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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Accept

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Setup Start ***NS1***

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Item Name: Replacement Skidtube

Stop ***NS2***

Start Date: 4/3/2012 Start Qty: 1.00 ***1***

Cust Item ID:

Required Date: 4/4/2012 Req'd Qty: 1.00 ***1***

Customer: CU-DAR001

Reference: RMA RA111333

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start ***NR1***
Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
190	QC5- Inspect part completeness to step on W/O	0.00							
190									
QC	Memo	0.00							
Quality Control									
200	Identify as per dwg & Stock Location: _____	0.00							
200									
Packaging	Memo	0.00							
Packaging	ID AND STOCK UNDER NEW BATCH NUMBER								
	Identify and pack for shipping as per PPPD205-634-041								
	Location: _____								
	PPP Rev: _____								
210	QC21- Final Inspection - Work Order Release	0.00							
210									
QC	Memo	0.00							
Quality Control									

Deformis 12-4-27

4/4/12

12/5/1

12-04-20

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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NOTE: Date & initial all entries

Picklist Print

Tuesday, April 17, 2012 1:12:30 PM

Page 1

Work Order ID: 82504

Parent Item: D205-634-041

Parent Item Name: Replacement Skidtube

Start Date: 4/3/2012

Required Date: 4/4/2012

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:N 02.08.28 FP was QC5 in Step 27; Added QC5 to Step 30
KJ IPP Rev P 10.02.19 per PAR09-043 EC
verified by:DD
IPP Rev. O 06.02.28 Added paperwork EC
IPP Rev:P 07-07-09 SS Wearplates & Gaskets JLM IPP Rev:Q 10.12.01 as per chg003
DD verf:EC IPP REV:R 12.01.23 AS PER ECN11-684 VERF:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
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ALS4-1032-130

Purchased

No

Each 5,643.0000

50

Insert

Location	Loc Qty	Loc Code
----------	---------	----------

ST280	205	
-------	-----	--

119084	116	
--------	-----	--

120671	89	
--------	----	--

ST281	2438	
-------	------	--

120807	438	
--------	-----	--

120837	2000	
--------	------	--

ST282	3000	
-------	------	--

121269	3000	
--------	------	--

AN3-5A

Purchased

No

Each 1,500.0000

Bolt

Location	Loc Qty	Loc Code
----------	---------	----------

ST350	1500	
-------	------	--

115371	46	
--------	----	--

117423	124	
--------	-----	--

118626	145	
--------	-----	--

119355	200	
--------	-----	--

120187	500	
--------	-----	--

121185	485	
--------	-----	--

(x ~~D205-634-041~~ x 13 77245)

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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Picklist Print

Tuesday, April 17, 2012 1:12:31 PM

Page 2

Work Order ID: 82504

Parent Item: D205-634-041

Parent Item Name: Replacement Skidtube

Start Date: 4/3/2012

Required Date: 4/4/2012

Start Qty: 1.00

Required Qty: 1.00

AN3C4A Purchased No Each 2,842.0000
BOLT

u 50 n10x125

Location	Loc Qty	Loc Code
ST350	2842	
120187	1776	
120521	28	
120769	38	
121205	1000	

x50

D205-634-041
Replacement Skidtube

Manufactured No Each 8.0000

B 765153 (x1) u n10x125

Location	Loc Qty	Loc Code
FG	2	
56133	0	
56134	0	
56135	0	
56136	0	
56137	0	
56565	0	
56566	0	
76919	1	
78063	1	
FG073	6	
78825	1	
79112	1	
79114	1	
79738	1	
79770	1	
79789	1	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Tuesday, April 17, 2012 1:12:31 PM

Page 3

Work Order ID: 82504

Parent Item: D205-634-041

Parent Item Name: Replacement Skidtube

Start Date: 4/3/2012

Required Date: 4/4/2012

Start Qty: 1.00

Required Qty: 1.00

D2594-1 Manufactured No Each 535.0000
Plug, 205 Skidtube

16

yu 12/04/25

Location	Loc Qty	Loc Code
FP001	322	
73401	30	
74442	34	
79495	258	
FP-A	213	
73401	0	
78590	213	

x16

D2594-3 Manufactured No Each 2,642.0000
O-Ring, 205 Skidtube

16

yu 12/04/25

Location	Loc Qty	Loc Code
FP001	2642	
65518	41	
79496	984	
79573	50	
79755	1567	

x16

D3566-1 Manufactured No Each 37.0000
Gasket

2

yu 12/04/25

Location	Loc Qty	Loc Code
FP	-10	
81619	22	
FP002	47	
68924	2	
80919	13	

x2

D3566-13 Manufactured No Each 16.0000
Gasket

1

yu 12/04/25

Location	Loc Qty	Loc Code
FP002	16	
76947	16	

x1

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Shop Packet Print

Page 3

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Tuesday, April 17, 2012 1:12:31 PM

Page 4

Work Order ID: 82504

Parent Item: D205-634-041

Parent Item Name: Replacement Skidtube

Start Date: 4/3/2012

Required Date: 4/4/2012

Start Qty: 1.00

Required Qty: 1.00

D3566-5 Manufactured No Each 34.0000
Gasket

1 *mu* 12/04/25

Location	Loc Qty	Loc Code
FP	16	
82275	16	
FP002	18	
80374	12	
82274	6	

X1

NAS1149C0332R Purchased No Each 2,425.0000
Washer

50 *mu* 12/04/25

Location	Loc Qty	Loc Code
ST297	219	
119736	196	
120648	23	
ST298	2206	
121255	2206	

X50

NAS1149D0332J Purchased No Each 2,955.0000
Washer

2 *mu* 12/04/25

Location	Loc Qty	Loc Code
ST298	2955	
105793	12	
110985	4	
117087	89	
119042	38	
119717	544	
120644	277	
121011	1991	

X2

Dart Aerospace Ltd

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LIST OF MATERIALS					
ITEM	QTY -041	QTY -045	QTY -047	PART NUMBER	DESCRIPTION
1	X			D2580-041	SKIDTUBE ASSEMBLY
2		X		D2580-045	SKIDTUBE ASSEMBLY
3			X	D2580-047	SKIDTUBE ASSEMBLY
4	1	1	1	D2500-1-190	EXTRUSION
5			16	D2570	BUSHING
6	1	1	1	D2576-3	STEP
7	20	24	25	D2579	SPACER
8	16	16	8	D2594-1	PLUG
9	16	16	8	D2594-3	O-RING
10	1	1	1	D2596	205 WEB
11	1	1	1	D2855	AFT CAP
12	1	1		D3564-5	WEARSHOE
13	1	1		D3564-9	WEARSHOE
14	1	1		D3564-11	WEARSHOE
15	1	1		D3564-13	WEARSHOE
16	2	2		D3566-1	GASKET
17	1	1		D3566-5	GASKET
18	1	1		D3566-13	GASKET
19			1	D4406-041	WEARPLATE ASSEMBLY
20			1	D4406-043	WEARPLATE ASSEMBLY
21	50	50		ALS7-1032-130 or AKS7-1032-130 or AKS4-1032-130 or AELS-1032-130	INSERT
22	50	50		AN3C4A	BOLT
23	2	2	2	AN3-5A	BOLT
24			8	AN4-45A	BOLT
25	50	50		NAS1149C0332R	WASHER (AN960C10L)
26	2	2	2	NAS1149D0332J	WASHER (AN960JD10L)
27			8	MS21042-4	NUT (OR MS21042L4)

GENERAL NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: CHEMICAL CONVERSION PER DART QSI 005 4.1 PRIOR TO INSERTING D2596 WEB
POWDER COAT ASSEMBLY (-041/-047) GLOSS WHITE (REF 4.3.5.1) PER DART QSI 005 4.3
POWDER COAT ASSEMBLY (-045) GREEN SANDEX (REF 4.3.5.8) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT AS INDICATED PER DART QSI 005 4.4
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED.
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX.
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: D2580-041 = 34.5 lbs
D2580-045 = 34.5 lbs
D2580-047 = 37.7 lbs
- 8) WELDING PER DART QSI 004.
- 9) INSERT D2596 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241 ADHESIVE PER DART QSI 015 BEFORE BENDING. ENSURE HOLES LINE-UP.
- 10) BEND AS A SMOOTH RADIUS STARTING WITH A MAXIMUM CENTERLINE RADIUS OF 60 AND ENDING WITH A MINIMUM RADIUS OF 30. A MAXIMUM REDUCTION OF 0.200 IN DIAMETER IS ALLOWABLE IN THE BENT PORTION OF THE TUBE.
- 11) USE DART DRILL TEMPLATE DT8217 & DT8937 ONLY FOR D2580-041/-045 TO LOCATE AND DRILL Ø0.297 HOLES FOR WEARSHOE INSERTS. INSTALL ALS7-1032-130 PER SECTIONS B-B AND F-F (50 PLACES) AFTER FINISH. INSTALL AN3C4A BOLTS AND NAS1149C0332R WASHERS WITH SIKAFLEX-241/291.
- 12) INSERT D2594-1 PLUG C/W D2594-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE) AFTER FINISH (16 PLACES FOR D2580-041/-045 AND 8 PLACES FOR D2580-047)
- 13) IT IS ACCEPTABLE TO GRIND A RELIEF IN THE D2855 AFT CAP TO PREVENT INTERFERENCE WITH THE SPACER AT THIS LOCATION

DEO ATTACHED

RELEASED

2011-08-29

E	ADD D2580-047 (ZN C4-7) AND D2580-7 (ZN B3-8); INCLUDED DEO D2580-D-1; REFORMATTED DRAWING TO CURRENT STANDARDS; DT8217 & DT8937 WAS TD2577-205 (ZN C4-1)	RF	11.06.21
D	CHANGE TO SS WEARPLATES AND GASKETS, INCLUDE DEO 9124/ 9183	PH	07.04.05
C	REDRAWN, INCLUDED DEO 9094/ 9097	CP	98.08.26
B	AS MANUFACTURED	DS	96.12.02
A	NEW ISSUE	DS	96.09.16
REV.	DESCRIPTION	BY	DATE
DESIGN	#	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	10	DRAWING NO.	REV. E
MFG. APPR.	10	D2580	SHEET 1 OF 8
APPROVED	10	TITLE	SCALE
DE APPR.	10	205 SKIDTUBE ASSEMBLY	NTS
DATE	11.06.21	COPYRIGHT © 1996 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD	

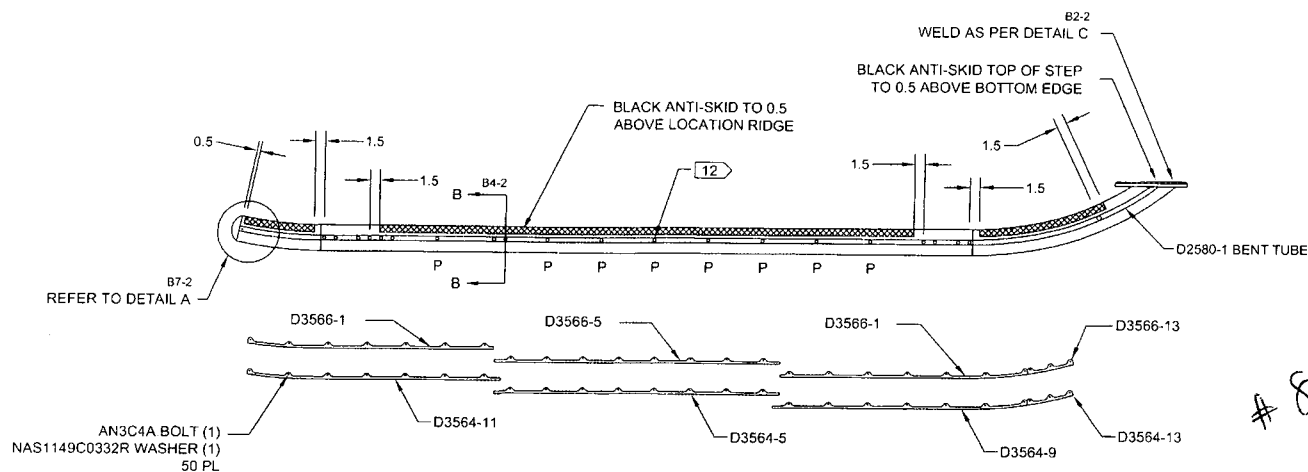
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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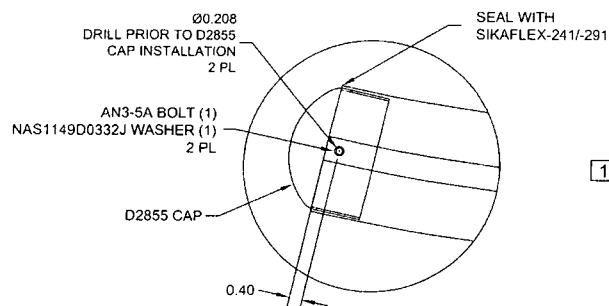
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

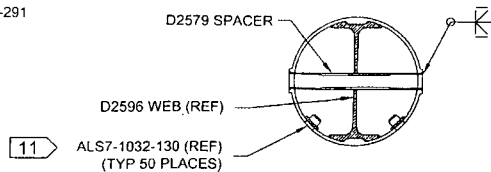


D2580-041 ASSEMBLY DETAIL

DETAIL A C7-2
SCALE 5X

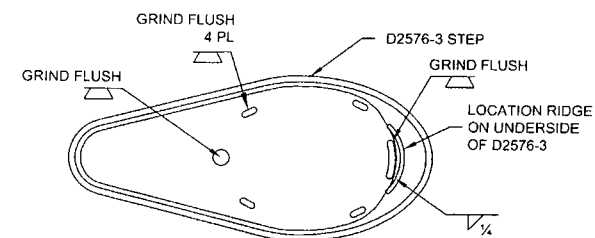


SECTION B-B D5-2
SCALE 5X



- AFTER DRILLING AND BENDING ASSEMBLY
PERFORM THE FOLLOWING FOR Ø0.508 HOLES ONLY:
1. CHAMFER HOLE 0.050 X 45°
 2. INSERT D2579 SPACER (20 PLACES)
 3. WELD INTO PLACE AND GRIND FLUSH
 4. C'BORE D2579 SPACER TO Ø0.437 X 1.00 DEEP

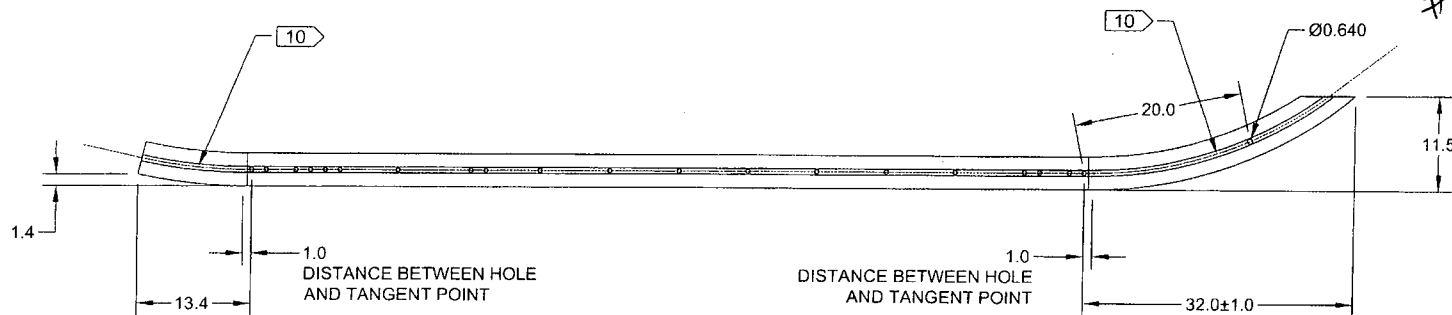
DETAIL C D3-2
SCALE 5X



DESIGN	#	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	140	DRAWING NO.	REV. E
MFG. APPR.	140	D2580	SHEET 2 OF 8
APPROVED	140	TITLE	SCALE
DE APPR.	140	205 SKIDTUBE ASSEMBLY	NTS
DATE	11.06.21	<small>COPYRIGHT © 1996 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD</small>	

DEO ATTACHED
RELEASED
2011-08-29

82504

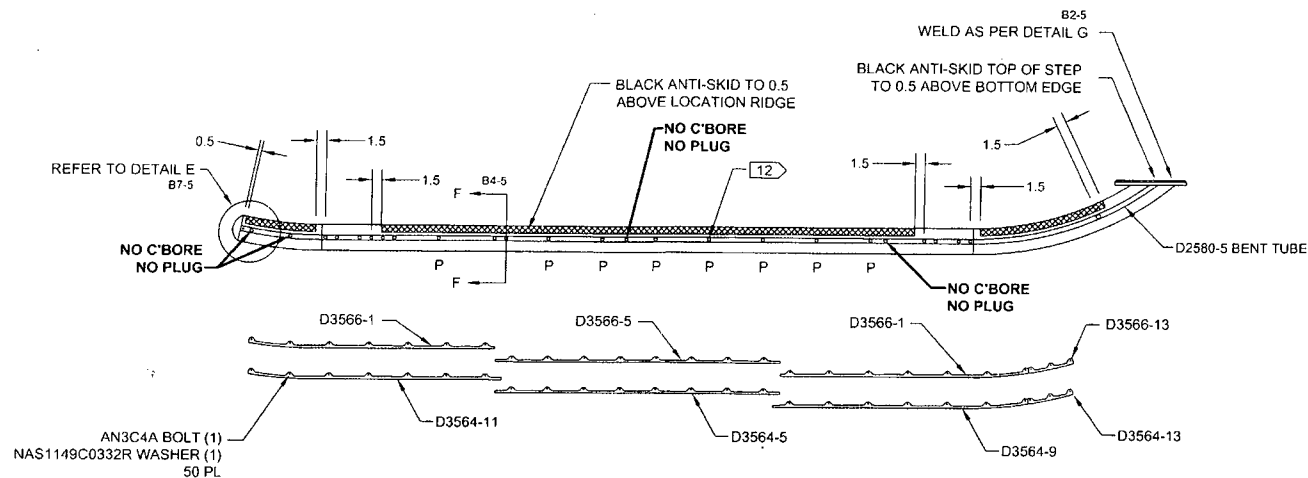


D2580-1 BENT TUBE
(MAKE FROM D2580-101 TUBE)

DEO ATTACHED

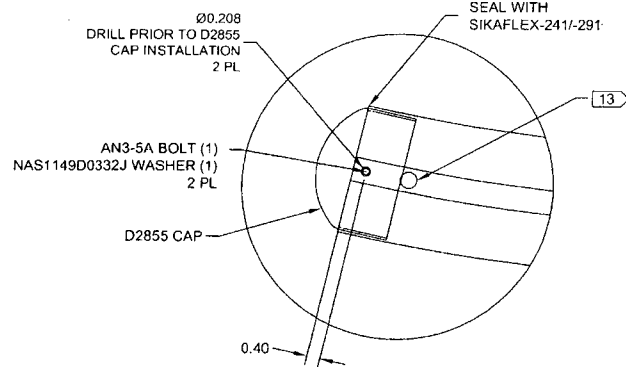
RELEASED
2011-08-28
JW

DESIGN	#	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	10	DRAWING NO.	REV. E
MFG APPR.	10	D2580	SHEET 3 OF 8
APPROVED	10	TITLE	SCALE
DE APPR.	10	205 SKIDTUBE ASSEMBLY	NTS
DATE	11.06.21	COPYRIGHT © 1996 BY DART AEROSPACE LTD	
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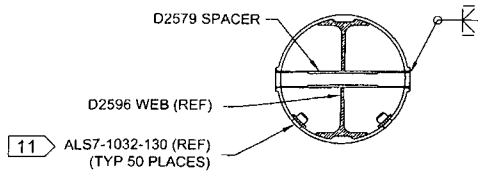


D2580-045 ASSEMBLY DETAIL

DETAIL E
SCALE 5X

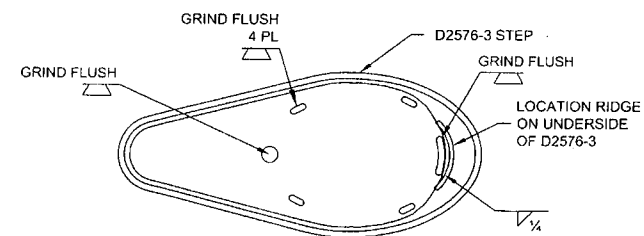


SECTION F-F
SCALE 5X



- AFTER DRILLING AND BENDING ASSEMBLY
PERFORM THE FOLLOWING FOR Ø0.508 HOLES ONLY:
1. CHAMFER HOLE 0.050 X 45°
 2. INSERT D2579 SPACER (24 PLACES)
 3. WELD INTO PLACE AND GRIND FLUSH
 4. C'BORE D2579 SPACER TO Ø0.437 X 1.00 DEEP

DETAIL G
SCALE 5X

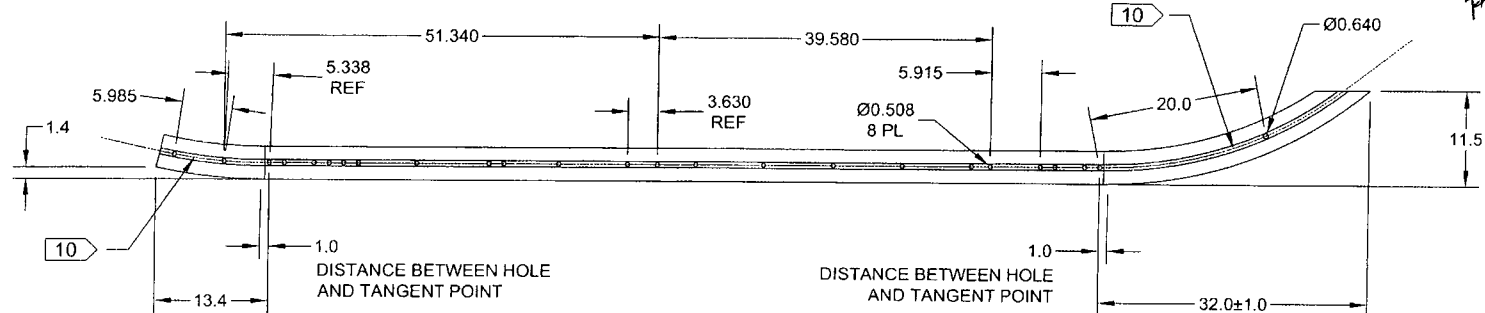


DESIGN	#	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	10	DRAWING NO.	REV. E
MFG. APPR.	10	D2580	SHEET 4 OF 8
APPROVED	10	TITLE	SCALE
DE APPR.	10	205 SKIDTUBE ASSEMBLY	NTS
DATE	11.06.21	<small>COPYRIGHT © 1996 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD</small>	

DEO ATTACHED

RELEASED
2011-08-29

#82504

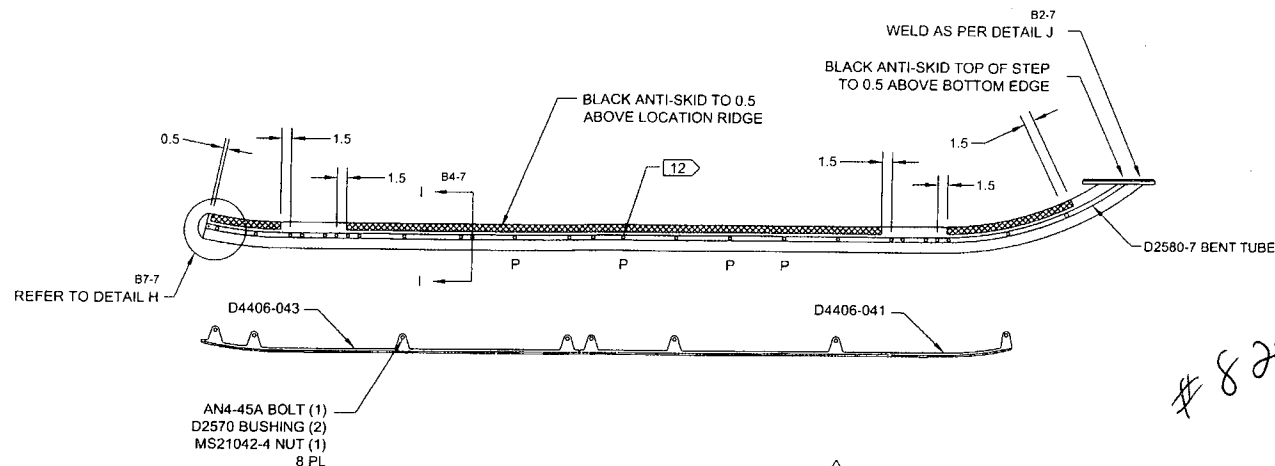


D2580-5 BENT TUBE
(MAKE FROM D2580-101 TUBE)

DEO ATTACHED

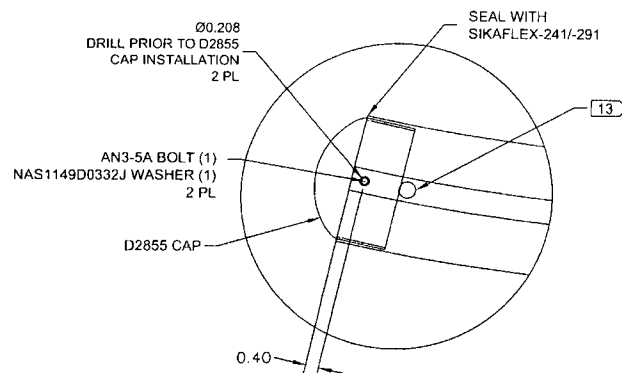
RELEASED
2011-08-29

DESIGN	#	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	10	DRAWING NO.	REV. E
MFG. APPR.	10	D2580	SHEET 5 OF 8
APPROVED	10	TITLE	SCALE
DE APPR.	10	205 SKIDTUBE ASSEMBLY	NTS
DATE	11.06.21	<small>COPYRIGHT © 1995 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL, AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

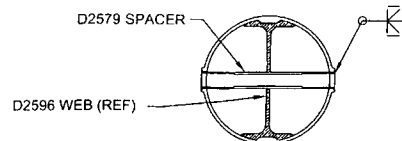


D2580-047 ASSEMBLY DETAIL E

DETAIL H C6-7
SCALE 5X

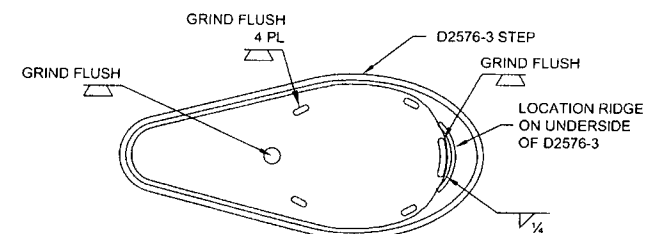


SECTION I-I D5-7
SCALE 5X

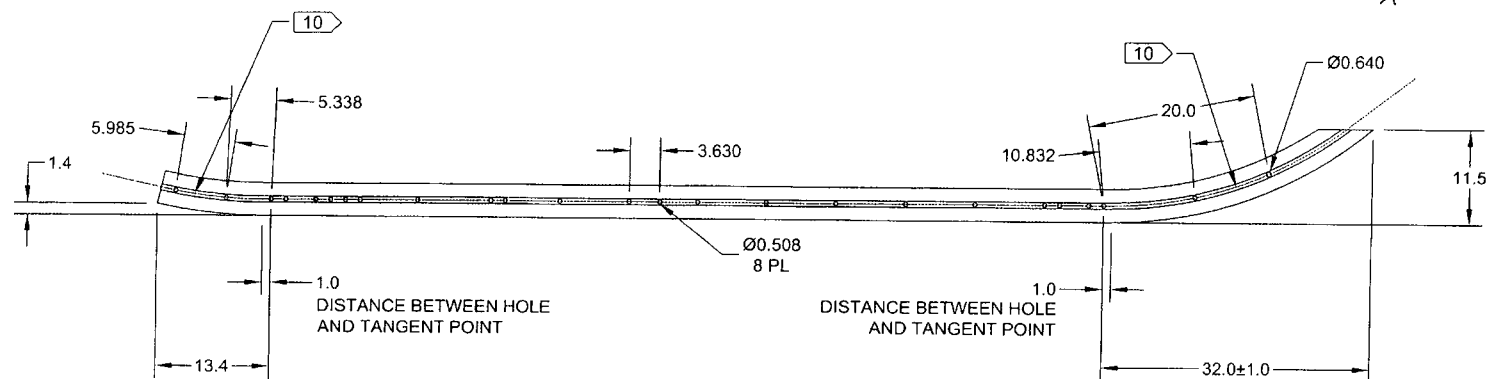


- AFTER DRILLING AND BENDING ASSEMBLY
PERFORM THE FOLLOWING FOR Ø0.508 HOLES ONLY:
1. CHAMFER HOLE 0.050 X 45°
 2. INSERT D2579 SPACER (25 PLACES)
 3. WELD INTO PLACE AND GRIND FLUSH
 4. C'BORE D2579 SPACER TO Ø0.437 X 1.00 DEEP

DETAIL J D3-7
SCALE 5X



DESIGN	#	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	140	DRAWING NO.	REV. E
MFG. APPR.	140	D2580	SHEET 6 OF 8
APPROVED	140	TITLE	SCALE
DE APPR.	140	205 SKIDTUBE ASSEMBLY	NTS
DATE	11.06.21	<small>COPYRIGHT © 1996 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	



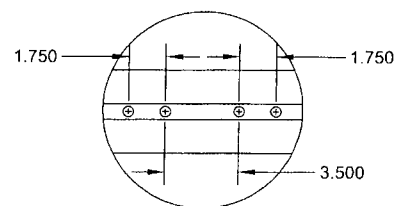
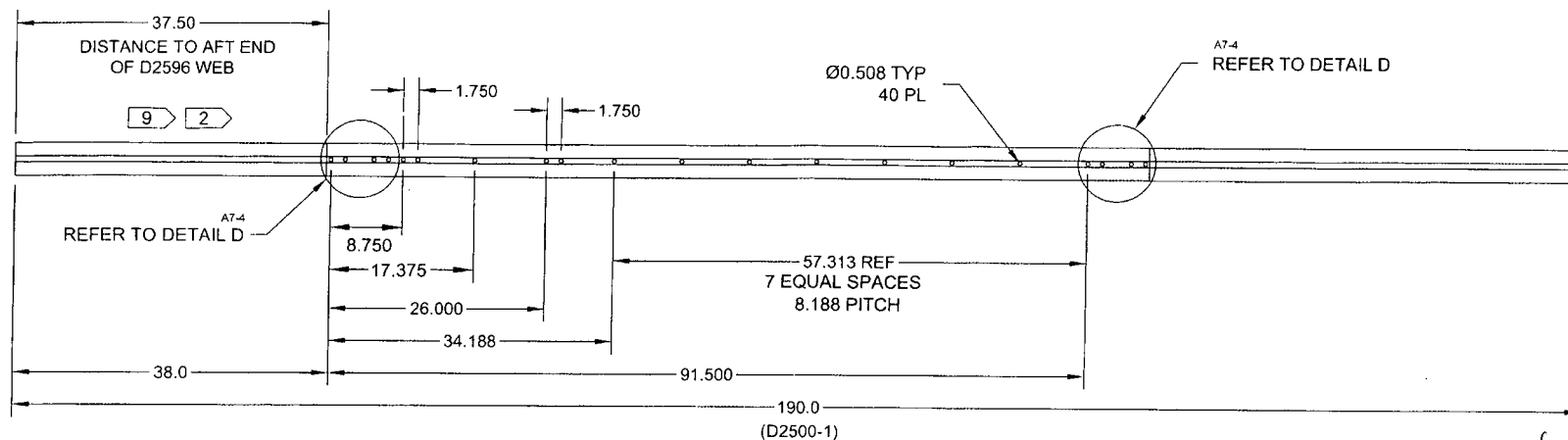
D2580-7 BENT TUBE
(MAKE FROM D2580-101 TUBE)



DEO ATTACHED

RELEASE
2011-08-29
NN

DESIGN	#	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	10	DRAWING NO.	REV. E
MFG. APPR.	10	D2580	SHEET 7 OF 8
APPROVED	10	TITLE	SCALE
DE APPR.	10	205 SKIDTUBE ASSEMBLY	NTS
DATE	11.06.21	<small>COPYRIGHT © 1996 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMERCE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD</small>	



DETAIL D D3-4
SCALE 5X C7-4

D2580-101 TUBE

82804

DEO ATTACHED

RELEASED

2011-08-29

DESIGN	#	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	10	DRAWING NO.	REV. E
MFG APPR.	10	D2580	SHEET 8 OF 8
APPROVED	10	TITLE	SCALE
DE APPR.	#	205 SKIDTUBE ASSEMBLY	NTS
DATE	11.06.21	COPYRIGHT © 1996 BY DART AEROSPACE LTD	
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DRAWING NO. D2580	TITLE 205 SKIDTUBE ASSEMBLY	REV. E	DART AEROSPACE LTD ENGINEERING ORDER		D.E.O. NO. D2580-E-1	SHEET NO. SHEET 1 OF 1	SCALE NTS
DRAWN <i>UP</i>	CHECKED <i>ASS</i>	MFG. APPR. <i>EC</i>	APPROVED <i>[Signature]</i>		DE APPR. <i>[Signature]</i>		
DATE 11.12.13	DATE 11.12.13	DATE 11.12.13	DATE 11.12.13		DATE 11.12.13		

PURPOSE:

CHANGE ALL C'BORED WELDED CROSSBOLT SPACERS TO SWAGED SPACERS

CHANGE:

PARTS LIST IS AMENDED AS FOLLOWS:

WAS

QTY	QTY	QTY	PART NUMBER	DESCRIPTION
-041	-045	-047		
20	24	25	D2579	CROSS BOLT SPACER

IS

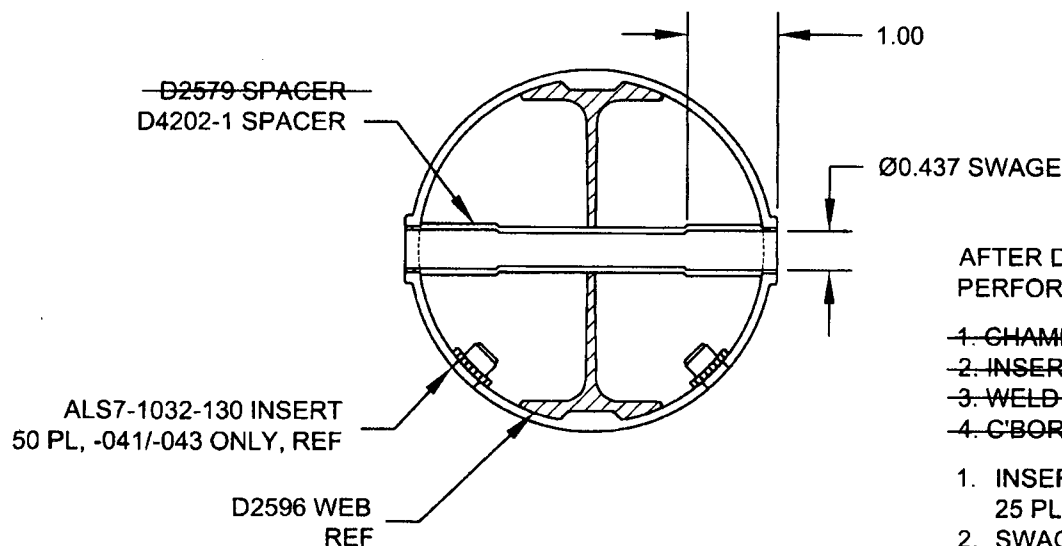
	4		* D2579	CROSS BOLT SPACER
20	20	25	D4202-1	SPACER

SECTION B-B, SECTION F-F, & SECTION I-I ARE AMENDED AS FOLLOWS
FOR ALL HOLES THAT WERE ORIGINALLY C'BORED:

*** FOR -045 SKIDTUBE ONLY:**

WELD 4X D2579 SPACERS PER DWG
IN LOCATIONS MARKED "NO C'BORE".
REF SHEET 4 OF DWG.

RELEASED
2011-12-13



AFTER DRILLING AND BENDING ASSEMBLY
PERFORM THE FOLLOWING FOR Ø0.508 HOLES ONLY:

1. CHAMFER HOLE 0.060 X 45°
2. INSERT D2579 SPACER (20 PLACES)
3. WELD INTO PLACE AND GRIND FLUSH
4. C'BORE D2579 SPACER TO Ø0.437 X 1.00 DEEP

1. INSERT D4202-1 SPACER, 20 PL (-041) OR 20 PL (-045) OR 25 PL (-047)
2. SWAGE TO Ø0.437 X 1.00 DEEP PER QSI 002
3. TRIM / GRIND FLUSH PER QSI 002

Picklist Print

November-30-11 12:39:12 PM

Page 1

Work Order ID: 77245

77245

Parent Item: D205-634-041

D205-634-041

Parent Item Name: Replacement Skidtube

Start Date: 30/11/2011

Required Date: 16/12/2011

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:N 02.08.28 FP was QC5 in Step 27; Added QC5 to Step 30
KJ IPP Rev P 10.02.19
per PAR09-043 EC verified by:DD
IPP Rev. O 06.02.28 Added paperwork EC
IPP Rev:P 07-07-09 SS Wearplates & Gaskets JLM IPP Rev:Q
10.12.01 as per chg003 DD verf:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D4202-1		Manufactured	No			140	Each	602.0000	20	20			

D4202-1 D2579
Spacer

**

Location	Loc Qty	Loc Code
LG	110	
67129	0	
74651	110	
LG002	492	
66929	106	
67129	196	
67308	1	
67430	140	
72639	49	

BE11-12-16
B77672 *20

REFERENCE ONLY

D2580-1

Manufactured No

110

Each

10.0000

1

1

**

D2580-1
205 Skidtube bent detail

Location	Loc Qty	Loc Code
LG	77269	
72965	1	
76174	2	
76175	2	
76510	2	
76511	1	
76570	2	

① MD 11-12-14

Picklist Print

November-30-11 12:39:12 PM

Page 2

Work Order ID: 77245

77245

Parent Item: D205-634-041

D205-634-041

Parent Item Name: Replacement Skidtube

Start Date: 30/11/2011

Required Date: 16/12/2011

Start Qty: 1.00

Required Qty: 1.00

D2576-3

Manufactured No

140

Each

102.0000

1

1

D2576-3

Step (maching detail)

**

BE 11-12-16

Location

Loc Qty

Loc Code

LG

102

66156

2

70883

50

74136

50

D2855

Manufactured No

200

Each

51.0000

1

1

D2855

Cap

**

BL 12-01-4

Location

Loc Qty

Loc Code

FP002

49

73347

49

FP007

2

65519

2

AN3-5A

Purchased No

200

Each

882.0000

2

2

AN3-5A

Bolt

**

BL 12-1-4

Location

Loc Qty

Loc Code

ST350

882

115371

46

117423

336

118626

300

119355

200

AN960JD10L

*ANAS1149D0332J

Purchased

No

200

Each

0.0000

2

2

AN960JD10L

Washer

**

2

BL 12-1-4

115389

November-30-11 12:39:13 PM

Shop Packet Print

Page 2

Picklist Print

November-30-11 12:39:13 PM

Page 3

Work Order ID: 77245

77245

Parent Item: D205-634-041

D205-634-041

Parent Item Name: Replacement Skidtube

Start Date: 30/11/2011

Required Date: 16/12/2011

Start Qty: 1.00

Required Qty: 1.00

ALS7-1032-130

Purchased

No

200

Each

1,793.000

50

50

AI S7-1032-130

**

BL 12-1-4

Insert

*ALS4-1032-130

Location

Loc Qty

Loc Code

ST280

119084

392

50

117717

27

118966

86

119775

279

ST281

221

119794

221

ST282

1180

119530

1180

AN3C4A

Purchased

No

200

Each

2,630.000

50

50

AN3C4A

**

BL 12-1-4

BOLT

Location

Loc Qty

Loc Code

ST350

2630

117313

2

117688

5

117872

10

118112

16

118451

2

118838

954

119328

641

119749

1000

AN960C10L

*NAS1149C0332 ✓

Purchased

No

200

Each

0.0000

50

50

*AN960C10I *

**

BL 12-1-4

washer

119736

November-30-11 12:39:13 PM

Shop Packet Print

Page 3

Picklist Print

November-30-11 12:39:13 PM

Page 4

Work Order ID: 77245

77245

Parent Item: D205-634-041

D205-634-041

Parent Item Name: Replacement Skidtube

Start Date: 30/11/2011

Required Date: 16/12/2011

Start Qty: 1.00

Required Qty: 1.00

D3566-13

Manufactured No

200 Each

21.0000

**

D3566-13

Gasket

Location

Loc Qty

Loc Code

FP

20

73322 ✓

20

FP014

1

68341

1

D3566-5

Manufactured No

200 Each

21.0000

**

D3566-5

Gasket

Location

Loc Qty

Loc Code

FP002

21

75069 ✓

21

D3566-1

Manufactured No

200 Each

13.0000

**

D3566-1

Gasket

Location

Loc Qty

Loc Code

FP002

11

76941.

11

FP015

2

68924

2

D3564-11

Manufactured No

200 Each

12.0000

**

D3564-11

Wearshoe

Location

Loc Qty

Loc Code

FP001

12

77614.

12

74705

November-30-11 12:39:13 PM

Shop Packet Print

Page 4

Picklist Print

November-30-11 12:39:13 PM

Page 5

Work Order ID: 77245

77245

Parent Item: D205-634-041

D205-634-041

Parent Item Name: Replacement Skidtube

Start Date: 30/11/2011

Required Date: 16/12/2011

Start Qty: 1.00

Required Qty: 1.00

D3564-13

Manufactured No

200

Each

27.0000

1

1

D3564-13

**

Wearshoe

12-1-4.

Location

Loc Qty

Loc Code

FP00i

7

73323

7

FP002

19

75045 ✓

19

FP017

1

71594

1

D3564-9

Manufactured No

200

Each

21.0000

1

1

D3564-9

**

Wearshoe

12-1-4.

Location

Loc Qty

Loc Code

FP

2

73345

2

FP001

14

75071 ✓

14

FP019

5

67590

4

69943

1

November-30-11 12:39:13 PM

Shop Packet Print

Page 5

RA 111333 D205-634-041

B76920 & B76553

Received @ March 9th Dart, 2012
Inspected @ March 16th Dart, 2012

Customer: Vector Aerospace
Customer Contact: Scott Tucker? Mike Catrett
Shipped from: Andalusia, AL 36421

Instructions for RA 111333 D205-634-011 B76920 CHG 007

- Only -041 skid tube returned **NO KIT**
 - **Batch # of skid =B76420**
- Lots of minor damaged to powder finish
- Disassemble aft cap
- Disassemble wear plates from skid tube
 - Strip all wear plates and re-powder coat the
- Strip entire tube with paint stripper
- Touch up alodine if required as per QSI 004
- Re-powder coat white as per QSI 004
- Re wing walk as per QSI 004
- Re-assemble with all new bolts and washers
- All work to be done **UNDER NEW BATCH #**
- Need new **PAPER WORK & LABELS**

Instructions for RA 111333 D205-634-011 B76553 CHG 007

- Only -041 skid tube returned **NO KIT**
 - **Batch # of skid =B77245**
- Lots of minor damaged to powder finish
- Disassemble aft cap
- Disassemble wear plates from skid tube
 - Strip all wear plates and re-powder coat the
- Strip entire tube
- Touch up alodine if required as per QSI 004
- Re-powder coat white as per QSI 004
- Re wing walk as per QSI 004
- Re-assemble with all new bolts and washers
- Need new **PAPER WORK & LABELS**

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Time Estimate = 5 HOURS (1 hour stores), (4 hours finishing)
Departments Required: Stores (restocking) and finishing
Pictures Attached = YES

**THIS INSTRUCTION SHEET MUST
BE ATTACHED TO THE
RESTOCKING WORK ORDER AT
ALL TIMES!!!!**

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries